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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,992	03/23/2004	David S. Fredley	CE12409JME	2320

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MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
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EXAMINER

BLEVINS, JERRY M

ART UNIT PAPER NUMBER

2883

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,992	FREDLEY ET AL.	
	Examiner	Art Unit	
	Jerry Martin Blevins	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-6, 9-11, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pre Grant Publication to Wang et al., number 2004/0165860.

Regarding claims 1, 6, 11, 17, and 18, Wang teaches a (method of increasing the efficiency of a) light guide system (Figure 1), comprising: (providing) a light conduit (32) having light directing portions that direct light in a non-random manner; and (coating the light conduit with) a conformal reflective material (42) coated to the light conduit without a boundary between the light conduit and the reflective material.

Regarding claims 4 and 14, Wang teaches a light source (Figure 7, laser diode) optically coupled to the light conduit.

Art Unit: 2883

Regarding claims 5 and 15, Wang teaches a display structure (Figure 1, element 30) optically coupled to the light conduit.

Regarding claim 9, Wang teaches the use of displays (which include light conduits) as part of electronic devices (page 1, paragraph 3).

Regarding claims 10 and 16, Wang teaches that the light conduit includes a substantially planar surface at which the reflective material is coated (Figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 7, 12, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of US Patent to Herron et al., number 5,919,712.

Regarding claims 2 and 3, and 12 and 13, Wang teaches the limitations of the base claims 1 and 11, respectively. Wang does not teach that the reflective material defines a border of a volume through which light can travel and that the index of refraction of the volume is substantially constant and is the index of refraction of the light conduit. Herron teaches a reflective material (column 10, lines 17,18) coated to a light conduit (Figure 3C, element 302) which defines a border of volume (the waveguide) through which light can travel (column 10, lines 25,26) and that the index of the volume is substantially constant (column 9, lines 65-67 teach that the waveguide

Art Unit: 2883

has a substantially constant index of refraction from about 1.46 to 1.52) and volume is the index of refraction of the light conduit (since column 10, lines 25,26 teach that the volume through which the light can travel is the conduit). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wang with the reflective material of Herron. The motivation would have been to reduce scattering of light.

Regarding claims 7 and 20, Wang teaches the limitations of the base claims 1 and 17, respectively. Wang does not teach that the (coating includes applying) reflective material includes at least one of tin, nickel, copper, zinc, aluminum, silver, gold, chromium, and an alloy and a composite thereof. Herron teaches that the reflective coating materials include aluminum or silver (column 10, lines 29,30). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wang with the reflective material of Herron. The motivation would have been to increase the reflectance.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of US Pre Grant Publication to Hetzer, number 2001/0041041.

Regarding claim 8, Wang teaches the limitations of the base claim 1. Wang does not teach that the light conduit is a transparent member. Hetzer teaches waveguide elements (Figure 3, elements 9 and 10) which are transparent members (page 2, paragraph 22 and page 3 paragraph 47). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent waveguide of Hetzer

Art Unit: 2883

as the waveguide of Wang. The motivation would have been to localize and concentrate the light through the waveguide (Hetzer, page 2, paragraph 22).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of US Pre Grant Publication to Kragl, number 20040008952.

Regarding claim 19, Wang teaches the limitations of the base claim 17. Wang does not teach that the coating step includes spraying reflective material. Kragl teaches a method of coating an optical waveguide with reflective silver coating using a spraying technique (page 8, paragraph 87). It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the step of coating of Wang the technique of spraying reflective material as taught by Kragl. The motivation would have been to perform the coating in a simple, economic, well-known method (Kragl, page 8, paragraph 87).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2883

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800

